Water Resources and Sustainability in China

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Mr. Chairman, Ladies and Gentlemen,

It's my great pleasure to take part in this workshop. Several days ago, at the second China-US Environment and Development Forum meeting, China's Premier Zhu Rongji and US Vice President A.L. Gore madeimportant speeches on China-US exchanges and cooperation in areas of environment and development. Delegates of both sides had an exclusive exchange of ideas about environment, development and related areas. Particular concern was given to issues of water resources. Today, we are gathering here for a workshop to have further discussions on these issues. It is an important follow-up event of the E&D forum meeting and has significant implications. In recent years, the shortage of water resources has been the focus of global concern. Water crisis has affected economic and social development, environmental safety and human health. Drought, flood and water pollution have caused severe damages to the development of world economy. Utilization and management of water resources have become urgent problems for most countries. At present, 20% of the world population have no sufficient clean drinking water, half of the world population could not have sufficient hygiene services due to limit of water resources. It was estimated that if the current way of exploitation and consumption of water resources continues, by the year 2025, two thirds of the world population would be facing severe shortage of water supply.

China is a country with very little water resources per capita. Although the total amount of water resources reaches 2.8 trillion cubic meters, the amount available for use is only about 40-50%. Current average water resource per capita in China is only 2300 cubic meters, ranking the 109th in the world. China has been listed as one of the 13 countries with water deficit. It is predicted that by the year 2000, the amount of water deficit in cities in China will increase to more than 18 billion cubic meters, and water deficit for agricultural use will increase to 60 billion cubic meters. For many years, the dry-out repeatedly occurred in the Yellow River has seriously affected the economic development in the region.

China is also a country with frequent floods. On the one hand, more than 400 of the 600 cities in China suffer from water deficit, on the other hand, some places often suffer from floods caused by water surplus. Both temporal and geographic rainfall-

distributions in China are uneven. Over and more than 0.2 billion RMB respectively, only about 30,000 square kilometers of the eroded areas can be re-established each year. Most of the serious soil erosion occurs in the arid and semi-arid regions in north China, which accounts for 52.5% of the total land area of China. Therefore, the water problem has been a crucial factor that limits sustainable economic and social development in most regions of China. The problems of water resources and water environment are complex and mainly reflected in three aspects: the flood disasters, a major concern for a long time, the shortage of water resources, an increasingly evident limiting factor to development, and the water pollution directly affecting negatively economic development and quality of life in China. Population expansion, rapid economic development, particularly the industrialization and urbanization are increasingly demanding for more water resources, imposing requirements for both quantity and quality of water. To completely solve these problems requires the support by a strong economy. However, China is still a developing country and its economy and technology are still under-developed, this largely affects the exploration and utilization of water resources, and vice versa.

Water resources and economic development are two contrasting factors, affected and restrained by each other. Chinese government always attaches importance to exploration, utilization and conservation of water resources. The critical for efficient and sustainable water use is the better planning, exploration, utilization and conservation of water resources. To solve these problems relies largely on modern sciences and technologies. In recent years, Chinese government has taken a number of favorable measures to tackle the water problems. The first measure taken was the strengthened overall planning and regulation of water resources, the improved water protection and water pollution control. The second was the enhanced ecology establishment and protection of soil erosion. The third was the optimized deployment and integrated utilization of water resources, therefore making use of the multiple functions of water resources. The fourth was the adjustment of consuming patterns of water resources and the extended use of modern water-saving technologies for increased efficiency of water use. The fifth was the use of economic lever in promoting water resource conservation and the water-saving usage. The sixth was the implementation of water diversion programs across river basins based on the state overall water resource plan. We have been persisting in the strategy of combination of exploration and thrift with the first priority given to water-saving use. Measures have been taken to promote water protection and use of water-saving technologies, which have played a positive role in securing sustainable economic and social development in China. Just before the second China-US E-D forum meeting, vice president A.L.Gore wrote to Chinese premier Zhu Rongji expressing that the US government is

willing to provide aids to China for reduction of damages and rebuild in the flood-disastered areas. Meanwhile, he proposed that through this workshop we could explore opportunities for China-US cooperation and idea exchanges in water resource management. I would like to take this opportunity to express our thanks for this. Today, I am also glad to see so many representatives from both Chinese and US governments, experts of water resources and entrepreneurs are participating in this workshop.

The China-US cooperation in water resource utilization and management will produce positive effects on society, economy, environment, ecology and health care in both countries. No matter from the viewpoint of cost (for example, the direct economic loss by floods, stopped factory production by lack of water supply) or from the viewpoint of development opportunities (for instance, more efficient irrigation, increase of crop production and economic development in areas with water shortages), the sustainable utilization and management of water resources will greatly benefit the economies of both countries. I hope that through this workshop, the China-US cooperation and collaborative studies will be further strengthened on water use and protection. Moreover, discussions and exchanges between the two sides will be further promoted in water resource management policy-making, key technologies in water industries, reuse of wastewater, ecology and environment protection and water resource planning for river basins, drought/flood control and disaster mitigation, exploration of water energy and other related areas. These contribute to solve the water problems with which the world is facing. I believe that through scien-tech cooperation in water resources, China-US economic and trade relations will be further developed. Meanwhile, it will provide more opportunities and wide space for cooperation between Chinese and US enterprises.

The US has gained a lot of experience in exploration and management of the Mississippi River basin, construction of Hover dam and improvement of arid soils, from which China can learn. China has also accumulated experience in exploration and utilization of water resources and water saving uses. There is large space for China-US cooperation in many fields of water resources. I believe that as long as we join our hands and work together, we will benefit by learning from one another's experience in water resource management. We then will be able to realize the sustainable utilization of water resources and to stand against the challenges by the water problems in the 21st century. This would contribute greatly to the sustainable development of human society.

Finally, I wish the workshop a great success!

Thank you.